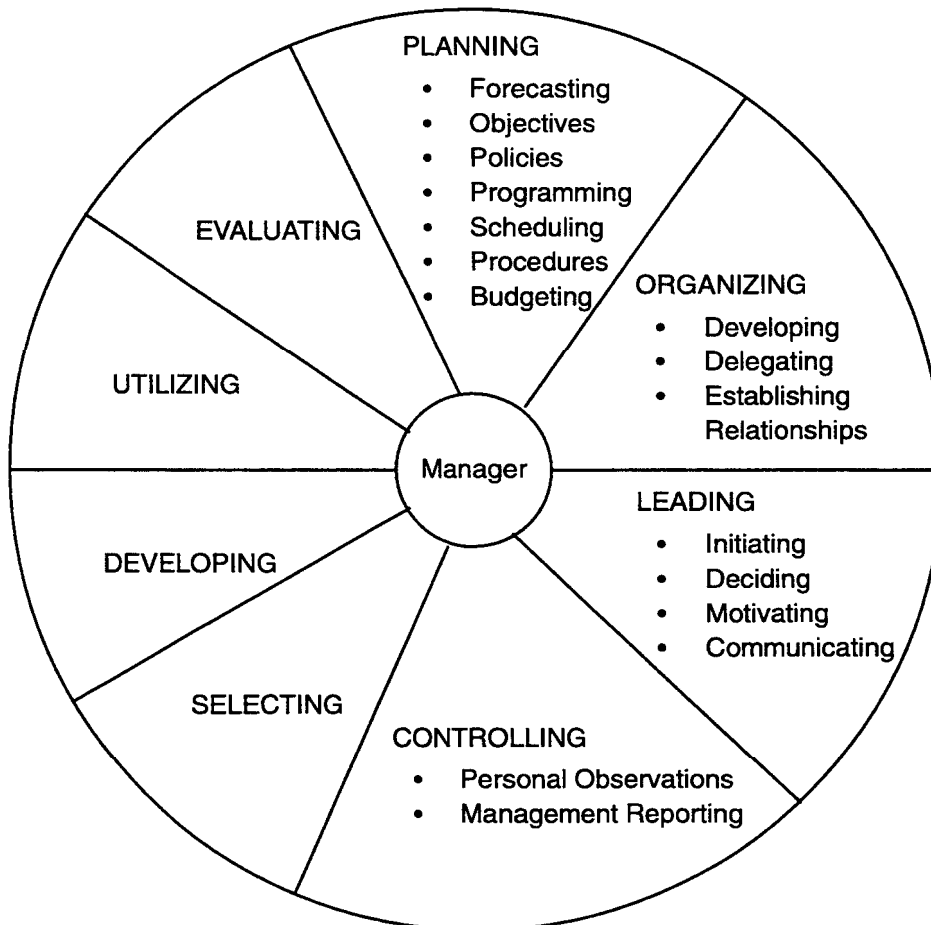


The Engineering Manager's Job

The functions of a manager are quite similar for managing any kind of situation, whether it's a team of technical specialists or an ASME activity. The manager's job includes the following functions: Planning; Organizing; Leading; Controlling; Selecting; Developing; Utilizing; and Evaluating.

Each of these major functions is made up of specific skill activities in which we must acquire and maintain proficiency. Each of these skills is used in a variety of ways in day-to-day management. The following pages list each function, with related skill activities and examples of how each skill can be used by us as engineering managers or as ASME leaders. Keep in mind that the listing is not all-inclusive. More importantly, the list *does* clearly illustrate typical decisions we make every day using one or more of the manager's skills.



The Eight Functions of Managing

1. PLANNING

a. *Forecasting*: Assessing outside influences that might have impact on the organization. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Types of tasks to be performed — Training time required — Number of personnel required — Types of people required (staffing) 	<ul style="list-style-type: none"> — Effect of economy on membership — Number of members to be lost during coming year — ASME activity finances

b. *Establishing Objectives*: Setting specific targets. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Maintaining high quality — Meeting all specifications — Design, prototype, and production release target dates — Cost reduction in a specific area — Develop or add a specific capability by exposing team members to experience 	<ul style="list-style-type: none"> — Number of new members — Dollars in treasury at end of fiscal year — Number of professional seminars to be held — Number of members involved in leadership of a Society activity — Amount of publicity desired — Relate group goals with national goals — Joint activity with others

c. *Establishing and Utilizing Policies*: Building guidelines for operating. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Limit amount of vacation during holidays — Discuss every tardiness with employee — Enforce quitting times — Appraise employees annually — Review team progress at regularly scheduled department meetings — Implement salary policy and procedures 	<ul style="list-style-type: none"> — Frequency of meetings — Honors and awards to give during year — Relations with other societies — Relations with students

d. *Programming*: Setting priorities. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Allow time for solving of anticipated problems — Establish firm milestones for completion of design phase, prototype phase, and test phase — Sequencing of training courses for team members — Check design progress to stress or emphasize corrective actions — Plug in short-term activities where needed due to problems on the line 	<ul style="list-style-type: none"> — Decide which seminars should be run and when — Choosing between levels of Society activities — Organizing meeting agendas

THE ENGINEERING MANAGER'S JOB

e. *Scheduling*: Setting time limits in which work is to be completed. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Set due dates on design phase to meet contract schedules for overall program — Set time limits on critical manufacturing tasks which offset schedules — Increase or reduce work force by X people by a certain date — Complete configuration control training by end of model year 	<ul style="list-style-type: none"> — Set due dates and check points of special seminars — Set reporting dates to the executive committee or policy board — Set yearly meeting schedule — Set mailing dates for meeting announcements

f. *Establishing and Utilizing Procedures*: Stating uniform operating methods. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Handle weekly time reports — Detail mechanics for engineering information on engineering change orders — Specify methods of controlling engineering change orders — Process employee suggestions — Expedite requests for engineering action — Handle material review reports 	<ul style="list-style-type: none"> — Determining how to handle cash income — Processing membership applications — Conducting monthly meetings — Conducting new officer investiture — Setting up a system for disbursements — Method of keeping track of member records — Methods to increase attendance at meetings

g. *Budgeting*: Re-allocating *all* resources (time, people, money, space, etc.) Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Determine spending rate of material dollars (purchase of test equipment or production material) — Work load (assigning people to specific design activities) — Allocate test equipment to meet program objectives — Allocate production material for engineering evaluation — Determine that spending rate is in conformity with accomplishments 	<ul style="list-style-type: none"> — Specify dollars for special programs and mailings — Identify member help needed on projects — Allocate support of officer talent and time through all scheduled activities — Determining and distributing free clerical or equipment support from members' organizations

2. ORGANIZING

a. *Developing Organization Structure:* Building management levels. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Separate groups to accomplish specific tasks — Separate work by project, product, or program — Establish systems groups 	<ul style="list-style-type: none"> — Set up committees and their members — Decide on activity organization chart — Decide on communication channels locally and regionally — Develop student sections

b. *Delegating:* Sharing responsibility, authority, and accountability. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Appoint a lead engineer or lead technician who controls the activities of others — Assign a specific design project to a specific engineer — Provide written descriptions describing tasks — Hold special conferences to discuss projects — Establish vacation and/or emergency replacement 	<ul style="list-style-type: none"> — Letting others know how much money they can spend — Deciding on specific responsibilities for special projects, monthly programs — Requiring specific goals from committee chairpersons — Setting up new committees and chairpersons

c. *Establishing Effective Working Relationships:* Coping with organizational and individual conflicts. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Implement a form of "open door" policy on a consistent continued basis — Develop meetings for free exchange of information between team members — Conduct "on call" meetings with manufacturing production control, or any other functional group to communicate problems — Help team members understand each other's problems 	<ul style="list-style-type: none"> — Holding periodic meetings of committee chairpersons and officers — Using communications channels with policy boards and national ASME — Providing periodic sessions with the business, government, and educational communities we serve — Inviting community leaders to dialogue with ASME — Cooperative activities with ASME and other societies

3. LEADING

a. *Initiating*: Getting action started. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Discuss objectives and the part each employee plays in them — Take action on higher management requests or change in schedules — Get an employee to decide which way to go in solving a design problem — Call in support to do special testing or evaluation 	<ul style="list-style-type: none"> — Ask membership for program ideas — Require periodic reports of all committee chairpersons — Starting all scheduled activities on time — Getting special awards for members

b. *Deciding*: Choosing between alternatives. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — How long to do a job — Selecting a design — How much testing is required before production release — Selecting a sampling plan — Overtime effort required — Number of people needed to do the job 	<ul style="list-style-type: none"> — Who should be members of committees — Where meetings will be held — Which objectives are critical — How much money should be spent on promotional mailings — Special program content

c. *Motivating*: Encouraging Others. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Periodic salary increases — Keep all informed about overall business picture, program status — Promote departmental activities (off the job, social, etc.) — Provide a challenging assignment for each employee 	<ul style="list-style-type: none"> — Leading by personal example — Providing recognition for outstanding achievement — Passing decisions down to committee chairpersons — Making professional growth opportunities available to members — Getting more members involved in Society activities

d. *Communicating*: Creating understanding. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Directives on performing new tasks — Progress report distribution — Meetings for feedback — Group appraisal and discussion of mutual problems — Listen objectively to team members' requests 	<ul style="list-style-type: none"> — Sharing policy board and national goals with members — Keeping members up to date on progress through newsletters or meetings — Letting others know of membership advantages through mailings and promotional articles

4. CONTROLLING

a. *Personal Observations:* Actually seeing results. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Compare results to planned objectives — How employees conduct themselves in contacting others — How employees conduct tasks — How employees handle design problems — Watching team members interact — Reviewing actual designs — Reviewing drafting specifications 	<ul style="list-style-type: none"> — Attend seminars to assess content and presentation — Observe committee meetings to observe progress — Review financial statements

b. *Management Reporting:* Allowing Others to Report Results. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Production discrepancy reports — Weekly manufacturing problem report — Review task plan progress — Discuss employee's performance with lead technicians or engineers — Review monthly budget against actual expenditures 	<ul style="list-style-type: none"> — Review periodic committee status reports — Review program reaction sheets for feedback from members

5. SELECTING: Putting the Right Person on the Right Job. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Education — Experience — Performance related to experiences — Comments from former supervisors or managers — Personal discussion to determine adaptability to jobs open 	<ul style="list-style-type: none"> — Picking committee chairperson and members — Deciding who will run meetings in absence of designated leader — Choosing committee representative to attend policy board or national meetings — Assigning someone to represent ASME at special sessions of interest to all members

6. DEVELOPING: Upgrading Knowledge, Skills, and Attitudes of Self and Staff.

Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Enroll in needed training (in plant, outside organizations, etc.) — Personal on-the-job orientation — Recommended literature to read — Recommended participation in professional societies — Encourage exchange of information within the team and others related to the project 	<ul style="list-style-type: none"> — Providing specific training for ASME officers — Personally working with selected future ASME officers — Enabling certain members to become leaders for ASME projects, programs, or seminars

7. UTILIZING: Making Best Use of Staff Talent and Time. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Give employees added authority — Select an employee for special design problem — Identify and utilize strengths of staff — Special training to strengthen special skills — Identify unique capabilities of employees 	<ul style="list-style-type: none"> — Letting ASME members choose roles that interest them most — Defining individual talents — Assigning tasks according to capabilities (e.g., best public speaker to be spokesman at critical public sessions)

8. EVALUATING: Letting People Know Where They Stand and How Well They are Doing. Examples:

Engineering Manager	ASME Leader
<ul style="list-style-type: none"> — Formal appraisal procedure including performance measurements — Compare meeting task schedules against program schedules — Compare design specifications against actual design — Compare actual delivery dates with targets — Compare actual expenses versus budget — Review actual mean time between failures 	<ul style="list-style-type: none"> — Compare ASME committee achievement with pre-determined goals — Assess financial progress — Provide periodic feedback to members — Check attendance at meetings